

U.S. DEPARTMENT OF COMMERCE
National Technical Information Service

AD-A026 607

SPECIAL DATA COLLECTION SYSTEM (SDCS) EVENT REPORT,
GUATEMALA, 04 FEBRUARY 1976

TELEDYNE GEOTECH

PREPARED FOR
AIR FORCE TECHNICAL APPLICATIONS CENTER

MAY 1976

195134

SDCS-ER-76-83

ADA026607

SPECIAL DATA COLLECTION SYSTEM EVENT REPORT
Guatemala, 04 February 1976

S.J. Hill, M.S. Dawkins, and M.D. Gillispie

Alexandria Laboratories

Teledyne Geotech, 314 Montgomery Street, Alexandria, Virginia 22314

MAY 1976

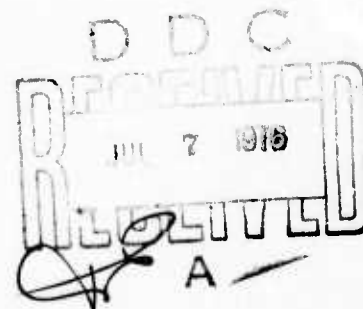
APPROVED FOR PUBLIC RELEASE; DISTRIBUTION UNLIMITED.

Sponsored By

The Defense Advanced Research Projects Agency
Nuclear Monitoring Research Office
1400 Wilson Boulevard, Arlington, Virginia 22209
ARPA Order No. 2897

Monitored By

VELA Seismological Center
312 Montgomery Street, Alexandria, Virginia 22314



REPRODUCED BY
**NATIONAL TECHNICAL
INFORMATION SERVICE**
U.S. DEPARTMENT OF COMMERCE
SPRINGFIELD, VA. 22161

Disclaimer: Neither the Defense Advanced Research Projects Agency nor the Air Force Technical Applications Center will be responsible for information contained herein which has been supplied by other organizations or contractors, and this document is subject to later revision as may be necessary. The views and conclusions presented are those of the authors and should not be interpreted as necessarily representing the official policies, either expressed or implied, of the Defense Advanced Research Projects Agency, the Air Force Technical Applications Center, or the US Government.

Unclassified

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1 REPORT NUMBER SDCS-ER-76-83	2 GOVT ACCESSION NO	3 RECIPIENT'S CATALOG NUMBER
4 TITLE (and Subtitle) SPECIAL DATA COLLECTION SYSTEM (SDCS) Guatemala, 04 February, 1976		5 TYPE OF REPORT & PERIOD COVERED Technical
		6 PERFORMING ORG. REPORT NUMBER
7 AUTHOR(s) Hill, K. J., Dawkins, M. S., and Gillispie, M. D.		8 CONTRACT OR GRANT NUMBER(s) F08606-74-C-0013
9 PERFORMING ORGANIZATION NAME AND ADDRESS Teledyne Geotech 314 Montgomery Street Alexandria, Virginia 22314		10 PROGRAM ELEMENT PROJECT, TASK & WORK UNIT NUMBER T/4703
11 CONTROLLING OFFICE NAME AND ADDRESS Defense Advanced Research Projects Agency Nuclear Monitoring Research Office 1400 Wilson Blvd.-Arlington, Virginia 22209		12 REPORT DATE May 28, 1976
		13 NUMBER OF PAGES 13
14 MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office) VELA Seismological Center 312 Montgomery Street Alexandria, Virginia 22314		15 SECURITY CLASS (of this report) Unclassified
		15a DECLASSIFICATION DOWNGRADING SCHEDULE
16. DISTRIBUTION STATEMENT (of this Report) APPROVED FOR PUBLIC RELEASE; DISTRIBUTION UNLIMITED.		
17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)		
18. SUPPLEMENTARY NOTES		
19. KEY WORDS (Continue on reverse side if necessary and identify by block number)		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number)		

Unclassified

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

SDCS EVENT REPORT NO. 83

Guatemala, 04 February 1976

This event report contains seismic data from the Special Data Collection System (SDCS), and other sources for the above event. Published epicenter information from seismic observations is:

	"P" Arrival	Origin Time	Lat.	Long.	m_b	M_s
NORSAR	09:14:05.4	09:01:52	16 N	090 W	6.5	N/A
Hagfors	09:14:10.3	09:01:48	13 N	083 W	5.8	N/A

Using SDCS stations, LASA and NORSAR, the epicenter location and magnitudes become

09:01:47.8 15.6N 089.2W 6.1 N/A

The programs used for LASA, NORSAR and ALPA data recovery are presently undergoing modifications. Information for LASA short-period is reported from their Teleseism Event Report; NORSAR short-period data is obtained from their bulletin. The long-period array beam recovery for these stations will be resumed upon completion of these modifications.

All SDCS stations were operational during this period.

Short-period signals associated with this event were recorded at all SDCS stations, LASA and NORSAR. All SP channels at HN-ME had polarity reversals; to correct this, mathematical inversions of the data were performed. Horizontal SP channels at WH2YK, HN-ME and RK-ON were rotated. Signal clipping prevented rotation of the horizontal SP channels at CPSO and FN-WV.

Long-period signals were recorded at all SDCS stations. All SDCS stations exhibited extensive signal clipping on the low-gain LP channels; for this reason LP plots were not included in this report.

Scaling factors on plots are millimicrons at 1 Hz (not corrected for instrument response).

STATION DESCRIPTION

SITE CODE	LOCATION	SITE COORDINATES		ELEVATION METERS	INSTRUMENTATION	
		DEG	NN SECS		SHORT - PERIOD	LONG - PERIOD
ALPA	Alaska	65 14 147 44	60.0 N 36.0 W	626	None	31300
CPSO	McMinnville, Tennessee	35 35 085 34	41.4 N 13.5 W	574	6480 V 7515 H	SL210 V SL220 H
FN-WV	Franklin, West Virginia	38 32 079 30	58.0 N 47.0 W	910	KS36000	KS36000
LASA	Billings, Montana	46 41 106 13	19.0 N 20.0 W	744	HS10	7505A V 8700C H
HN-ME	Houlton, Maine	46 09 067 59	43.0 N 09.0 W	213	KS36000	KS36000
NORSAR	Kjeller, Norway	60 49 010 49	25.4 N 56.5 E	379	HS10	7505A V 8700C H
RK-ON	Red Lake, Ontario	50 50 093 40	20.0 N 20.0 W	366	18300	SL210 V SL220 H
WH2YK	White Horse, Yukon	60 41 134 58	41.0 N 02.0 W	853	18300	SL210 V SL220 H

Note: The orientation of the radial instruments at FN-WV is assumed to be 16° + 5° based on empirical data (event recordings). Rotation, where performed, is referenced to this azimuth and may be questionable.

HYPOCENTER DETERMINATION

INPUT FOR EVENT 4 FEB 76
09:01:52.0 15.999N 90.000W 0KM.

STA.	ARRIVAL	RESIDUALS		DIST.	AZ.
		CALC	REST		
CPSO	09 06 23.6	-0.6	0.5	20.2	8.7
FN-WV	09 07 07.0	0.7	0.3	24.4	18.7
LAO	09 08 33.8	0.4	0.7	34.1	339.0
RK-ON	09 08 41.9	-0.5	-2.0	35.3	355.1
HN-ME	09 08 43.5	0.3	0.1	35.3	25.9
WH2YK	09 11 25.3	0.1	0.4	55.7	334.8
NAD	09 14 05.4	-0.4	0.0	81.3	29.2

67 HERRIN TRAVEL TIME TABLES

ORIGIN	LAT.	LONG.	DEPTH (KM)	SDV	IT	STA
09:02:39.1	17.964N	89.068W	350. CALC	0.5	15	7
09:01:47.8	15.620N	89.239W	0. REST	0.9	3	7

CALC				REST			
3	.	2		3	.	2	
0	.	0		0	.	0	
0	0.	2	0	0	0.	2	0
.
0	0.	0	0	0	0.	0	0
0	.	0		0	.	0	
0	.	0		0	.	0	

CHI2 COVERAGE ELLIPSE; 95 PER CENT CONF..LEVEL, SDV= 1.30
MAJOR 72.0KM. MINOR 49.9KM. AZ= 174 AREA= 11285 SQ.KM. REST

DATA SUMMARY

INPUT FOR EVENT 4 FEB 76
09:01:52.0 15.999N 90.000W OKM.

STA.	PHASE	ARRIVAL		INST	PER	A/T	MAGNITUDE		DIR	DIST
		TIME					MB	MS		
CPSO	EP	09 06 23.6		SPZ	1.3	1198.	5.79			20.2
FN-WV	EP	09 07 07.0		SPZ	1.1	492.	5.77			24.4
LAO	EP	09 08 33.8		SAB	39.9	9999.				
HN-ME	EP	09 08 43.5		SPZ	1.4	884.	6.32			35.3
RK-ON	EP	09 08 41.9		SPZ	1.1	452.	6.02			35.3
WH2YKM	EP	09 11 25.3		SPZ	0.9	42.	5.12			55.7
NAO	EP	09 14 05.4		AB	1.2	1016.	6.54			31.3

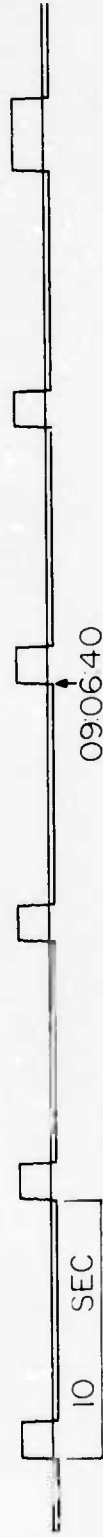
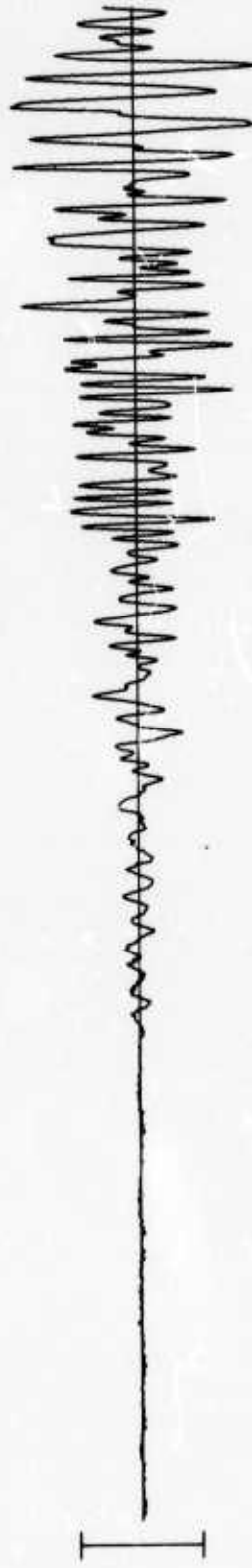
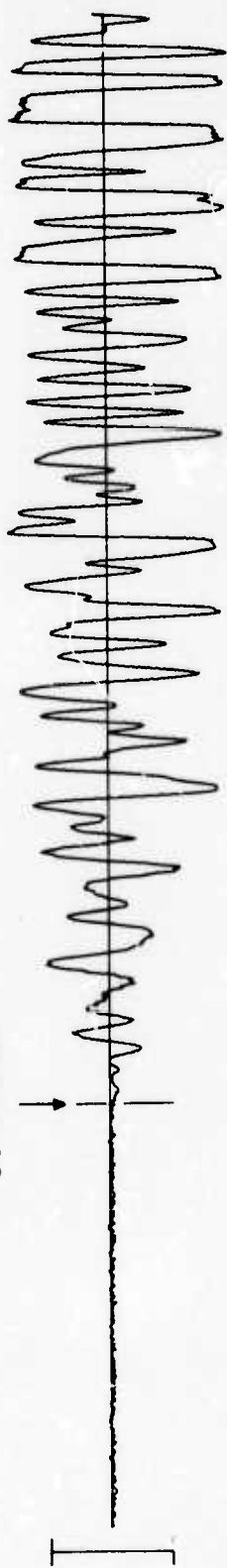
ORIGIN	LAT.	LONG.	DEPTH (KM)	MAG	SDV	STM
09:02:39.1	17.964N	89.068W	350. CALC	5.54	0.66	5
09:01:47.8	15.620N	89.238W	0. REST	6.09	0.34	5

WH2YK NOT USED IN REST RUN SP AVG. MAG.

WH2YK NOT USED IN RESTRAINED SP AVERAGE MAGNITUDE CALCULATION
BECAUSE ITS MAGNITUDE EXCEEDS THE SDV PARAMETERS OF THE HYPO-
CENTER PROGRAM.

CPS0 4 FEB 76

09:06:23.6



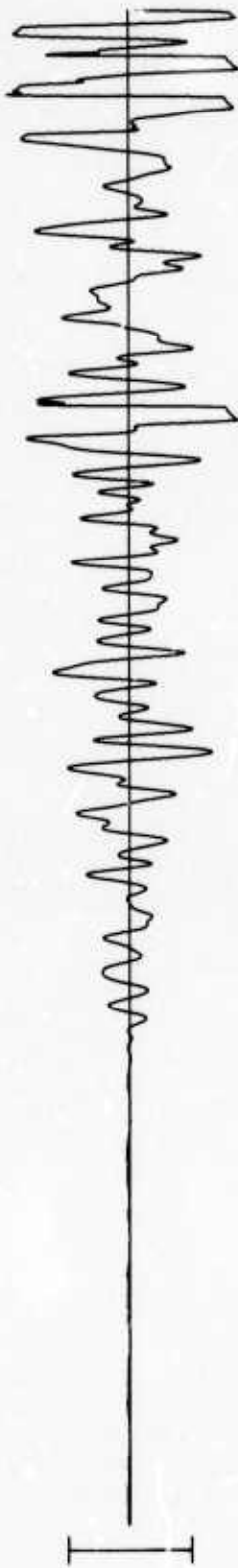
FN-WV 4 FEB 76

09:07:07.0

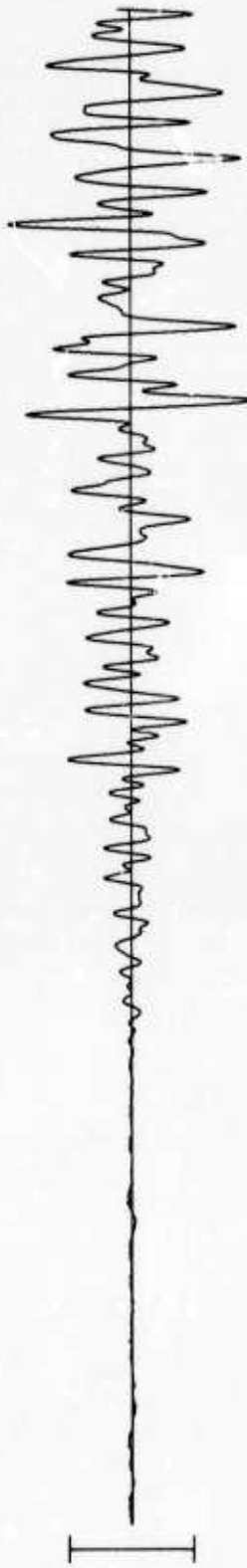
SPZ
389.13 MU



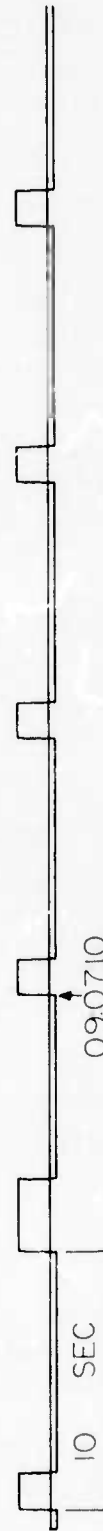
SPR
573.20 MU



SPT
296.43 MU



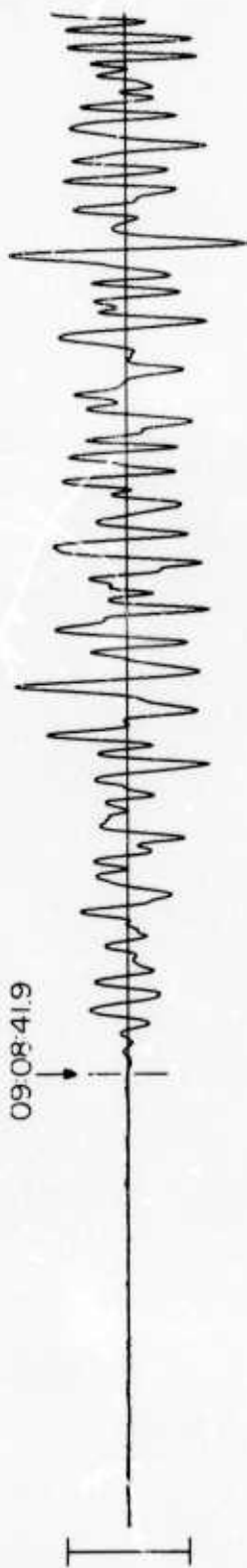
TIME



RK-QN 4 FEB 76

SPZ
647.76 MU

090841.9



SPR
406.19 MU



SPT
179.40 MU



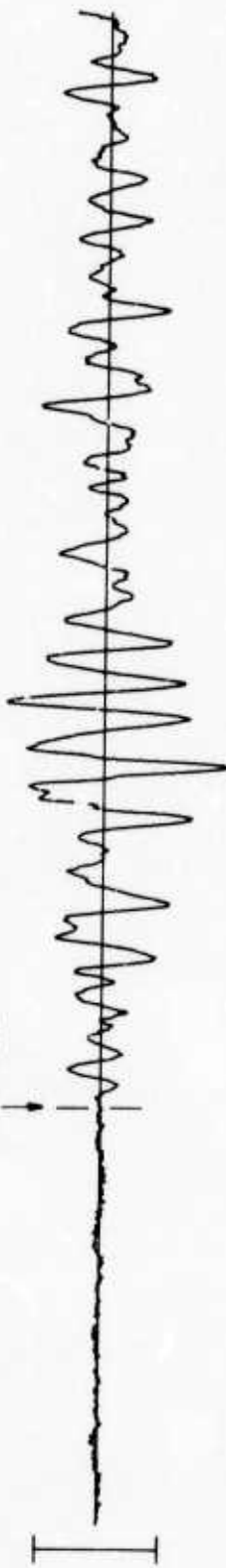
TIME



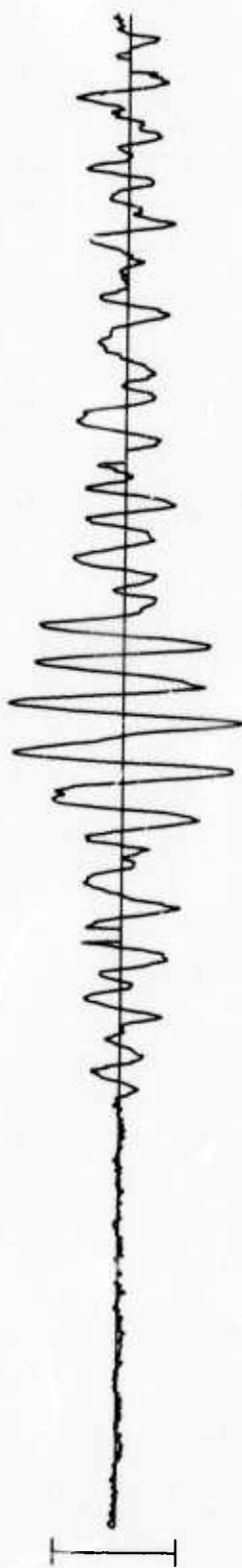
HN-ME 4 FEB 76

SPZ
718.18 MU

09:08:43.5



SPR
500.50 MU



SPT
150.46 MU



TIME



WH2YK 4 FEB 76

